UBR-27

CONFIDENTIAL BUSINESS INFORMATION

Section 1. Overview of Requirements

The Benicia refinery is subject to the benzene waste NESHAP regulation, which limits emissions of benzene to the atmosphere. As part of the Consent Decree signed with EPA, Valero has agreed to perform additional monitoring to verify compliance with the NESHAP regulation. This impacts WWT two ways:

1) **Carbon canister monitoring and,**
2) **Quarterly end of line (EOL) sample collection.**

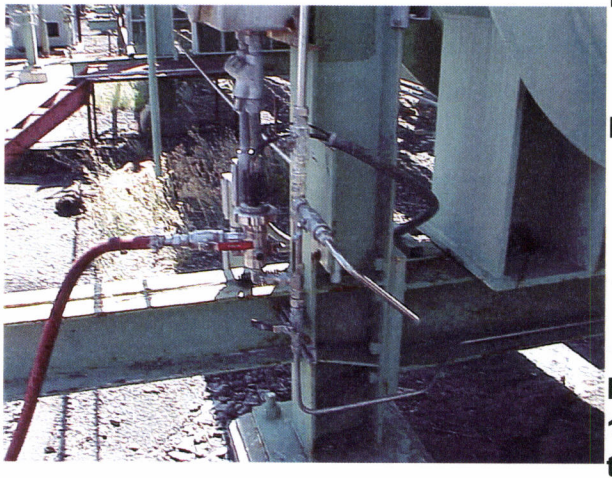
Carbon Canister Monitoring

The midpoint between the primary and secondary canisters, and the outlet of the carbon canisters must be monitored daily (at both WWT and Diversion Tank areas). If the benzene emissions are greater than 5 ppm, the carbon canisters must be changed out within 24 hours. The recordkeeping log must be filled out in its entirety to document the daily monitoring and number of changeouts (include the date of change out and which carbon canister set was changed out).

****Remember, this is a USEPA-Valero consent decree requirement and Valero gets audited on whether we are meeting these requirements. We need solid recordkeeping to close out the consent decree and avoid any fines.****

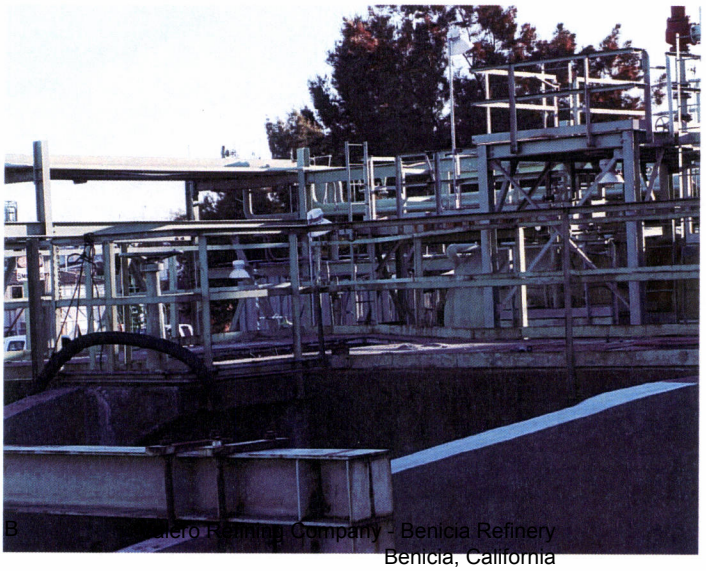
Quarterly EOL Sample Collection

The remainder of this training discusses the quarterly EOL sample collection requirements. For WWT, these two points are identified as EOL-1 and EOL-10



EOL-1 is the inlet to the diversion tanks:

EOL-10 is the diversion canal:



The diversion canal will be sampled at the beginning of each diversion event. If the diversion is continuous, the canal shall be sampled daily thereafter.

There are three (3) key requirements to collect a sample that meets the EPA requirements:

1) Where applicable, samples must be collected through a cooler so that the temperature is less than 50 °F.

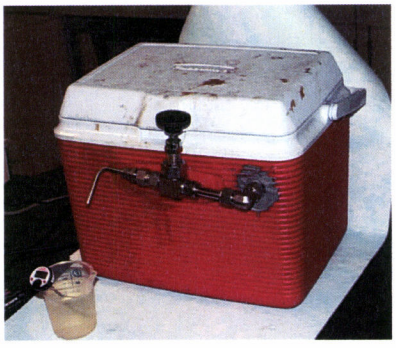
2) Samples must be collected into a VOA vial (shown below) with no air bubbles

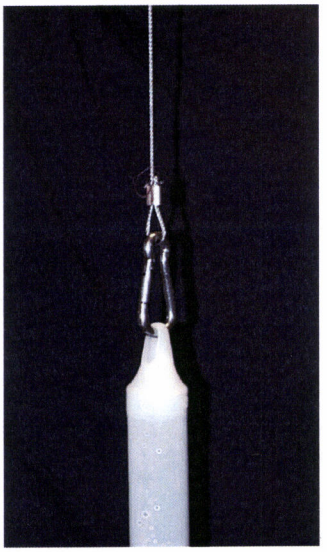
3) Records must be kept listing the name, date, time of the person collecting the sample and the temperature of the sample (if it must be cooled).

Section 2. Required Equipment

The following is a list of equipment needed to collect your samples:

1) Sample Collection Cooler used to collect the diversion tank sample EOL 1 at 50 °F.





2) EOL sample bailers and cable to collect diversion canal EOL 10 sample

3) Sample Transport Cooler used to keep the samples cool while they are being transported to the Lab refrigerator

4) 3 bags crushed ice (Stores) for the coolers

5) 2+ gallon bucket for any waste generated

6) EOL Tool Box contains thermometer, bailer cable, and other necessary items

7) Recordkeeping checksheet

8) Required PPE

a Valero Refining Company - California

Benicia Refinery

EOL Sample Check Sheet

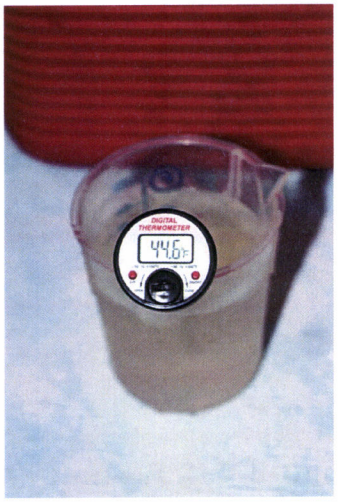
EOL Point	Description	Observation Date	Time	Name	Sample Y/N *	Temp (1)	* Comments
1	Inlet to Diversion Tanks						
2	T-2831 bottoms						
3	Product Pump Pad Sump						
4	High point vent sump						
5a	Spent caustic - VLE						
5b	Spent caustic - Dimersol						
5c	Spent caustic - BAP					n/a	
6	Dock Sump						
7	Blending Sump						
8	Miscellaneous (t/a, maintenance, spills, etc)						
9	Inlet to Groundwater Tank at Marketing Terminal						
10	Diversion Canal to WWT Ponds						
11	BAP wastewater effluent to City						
12	BAP WWT TK4612A outlet (2)						

Note 1) Sample temperature must be less than 10C (50F)

2) Estimate tank draw down rate at time of sample collection and add to comments section or report via email to Sky Bellanca.

EOL CheckSheet

Section 3. Sampling Instructions for EOL-1



1) Print out the EOL sampling procedures and checksheet linked to your SAP task.

2) Pick up 5 VOA vials from the Water Lab or Free Stores.

3) Check out the sample coolers and kit from the Tool Room (note: shops may choose to compile their own cooler and kit)

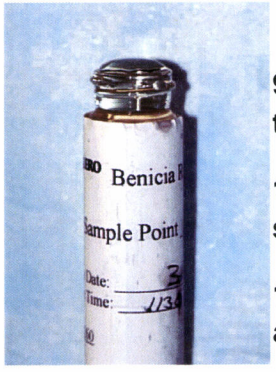
4) Fill both coolers with ice and add some water to the Sample Collection Cooler

5) Attach Sample Collection Cooler to sample point

6) Purge sample loop with 4 volumes of material (about 1.5 gallons using 2 braided steel hose connections and cooler coils)

7) Close sample valve and wait about 10 minutes to let the sample in loop cool to less than 50 °F (10 °C)

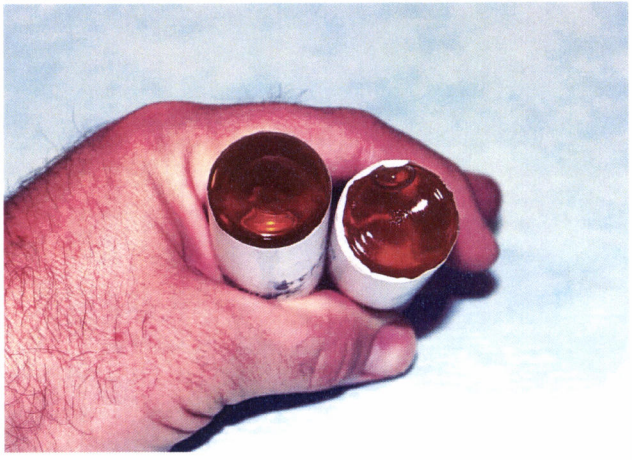
8) Check the temperature.



9) If the temperature is less than 50 °F (10 °C), record the temperature on the checksheet and continue to step #11.

10) If the temperature is above 50 °F (10 °C), continue to cool the sample.

11) Fill 5 VOA vials slowly until there is a visible dome, or meniscus, above the container.



12) Cap the vial immediately and label EOL-1. Invert to ensure there are no bubbles in the sample. If there is a bubble, discard the sample and take another.

13) Store these samples on ice in the Sample Transport Cooler

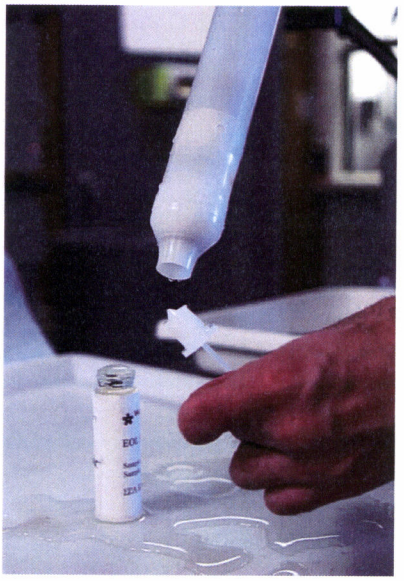
14) Deliver samples and checksheet to the main lab, log the samples into LIMS as an environmental maverick, and transfer

samples to the NESHAPs refrigerator next to the RVP water bath.

15) Clean out the stainless steel tubing in the Sample Cooler by flushing with water or steam

16) Return coolers and sample kit to the Tool Room

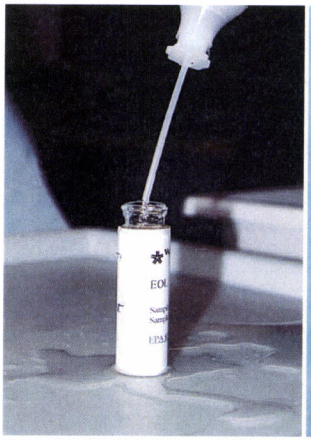
Section 4. Sampling Instructions for EOL-10

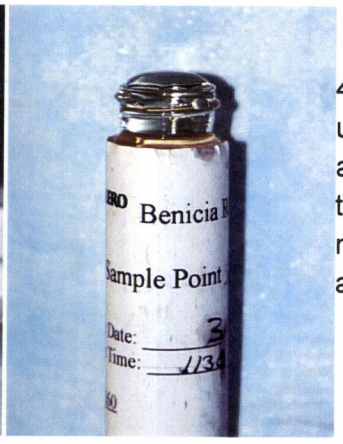


1) Pick up 10 VOA vials from the Water Lab or Free Stores and print out a copy of the EOL checksheet.

2) Pick up a couple disposable bailers from the Water Lab or Free Stores.

3) Collect a sample using the disposable bailer (insert the bailer in the liquid and a sample will automatically be collected. To transfer from bailer to VOA vial, connect the release tip to the bailer)





4) Using the bailer, fill 10 VOA vials slowly until there is a visible dome, or meniscus, above the container. The sample should be transferred directly from the bailer to the vial to minimize volatilization of benzene. Do not use a standard quart sample container.

5) Cap the vial immediately and Label EOL-10. Invert to ensure there are no bubbles in the sample. If there is a bubble, discard the sample and take another.

6) If there are two phases, collect the water phase in 5 vials and the oil phase in 5 vials. (note: this may not be possible for the oil phase).

7) Log you name and the date and time the sample was collected on the checksheet

8) Deliver samples and checksheet to the main lab, log into the LIMs as an environmental maverick, and transfer samples to the NESHAPS refrigerator next to the RVP water bath.